APPENDIX INDEX

	PAGE
Appendix A — Judgment of the District Court for Travis County, Texas	1a
Appendix B — Judgment of the Supreme Court of Texas	4a
Appendix C — Order overruling motion for rehearing, July 27, 1966	5a
Appendix D — Majority Opinion of the Supreme Court of Texas	6a
Appendix E — Dissenting Opinion (Associate Justice Smith)	19a
Appendix F — Dissenting Opinion (Associate Justice Hamilton)	32a
Appendix G — Order Staying Supreme Court Mandate	42a
Appendix H — Affidavits Demonstrating Confiscation of Petitioners' Gas	43a

APPENDIX A

No. 142,040

WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL. v. RAILROAD COMMISSION OF TEXAS	In the District Court of Travis County, Texas 53rd Judicial District

FINAL JUDGMENT

On the 26th day of April, 1965, came on for consideration the Motion for Summary Judgment filed by the Plaintiffs, Woods Exploration & Producing Company, Inc. and Southeastern Pipeline Company, and the Intervenors, Ben Novak and Claire Benz-Stoddard, aligned with the Plaintiffs, and all parties, Plaintiffs, Defendant and Intervenors appeared through their respective attorneys of record, and leave was granted to the Lumar Gas Corporation to intervene by agreement of the parties. Whereupon, the Court considered the Motion for Summary Judgment filed herein by the Plaintiffs and Intervenors aligned with them as aforesaid and the Answer thereto by the Railroad Commission of Texas, Defendant, and the Aluminum Company of America, Crown Central Petroleum Corporation and Pocantico Oil & Gas Corp., together with the instruments, affidavits and pleadings of the parties filed herein in connection with the Defendant's Motion for Summary Judgment, overruled by Order dated April 13, 1965, which it was in open court stipulated by all parties could be so considered by the Court in connection with this Motion; and after hearing the arguments in open court and considering the Motions for Sum-

mary Judgments and the Answers thereto and affidavits submitted in connection therewith and the sworn pleading of the Plaintiffs and stipulations of the parties filed for record herein, the Court is of the opinion and so finds that there is no dispute on the material issues of facts in this case, and that the law and the undisputed facts are with the Plaintiffs and the Intervenors aligned with them and against the Defendant and the Intervenors aligned with the Defendant, and that the ruling of the Railroad Commission on November 4, 1964 and the formal order thereon by the Railroad Commission dated February 1, 1965, being Special Order #2-53,009, effective December 1, 1964, adopting a new procedure for determining the maximum limit on the daily reasonable market demand from the five gas reservoirs, being Appling (Seg. 5) 7500′ field, and the Appling (Seg. 6) 7500′ field, the Appling (Seg. 6) 7600′ field, the Appling (Seg. 6) 7600′ lower field, and the Appling (Seg. A) Middle Kopnicky Field, situated in Calhoun County, Texas, is not within the statutory authority of the Railroad Commission under Sections 10, 11, and 12, Article 6008, R.C.S. and the undisputed facts and is therefore null and void.

It is therefore ORDERED, ADJUDGED and DECREED that the ruling of the Railroad Commission on November 4, 1964 and the Special Order thereon of the Defendant Railroad Commission, dated February 1, 1965, being Special Order #2-53,009, is null and void and illegal and has no just basis in law or in fact, and is hereby set aside.

It is further ORDER, ADJUDGED, and DECREED that the Defendant Railroad Commission of Texas and its members, Ben Ramsey, Jim Langdon and Byron Tunnell, and their agents, servants, and employees are permanently enjoined from enforcing or attempting to enforce said Order

dated February 1, 1965, being Special Order #2-53,009, and the ruling preceding the same, dated November 4, 1964, effective December 1, 1964.

It is further ORDERED, ADJUDGED and DECREED that Plaintiffs and Intervenors aligned with Plaintiffs have and recover of the Defendant and of the Defendant Intervenors herein all costs of suit, for which let execution issue.

To which Judgment of the Court Defendant and Defendant Intervenors then and there in open court duly accepted and gave notice of appeal.

SIGNED and ENTERED of record this the 26th day of April, 1965.

/s/ HERMAN JONES
Herman Jones
District Judge

APPENDIX B

SUPREME COURT OF TEXAS

June 22, 1966

No. A-10,825.

RAILROAD COMMISSION OF TEXAS ET AL. v. WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL.	Direct Appeal from Travis County

This cause came on to be heard on direct appeal from the 53rd District Court of Travis County, Texas, and the original transcript and briefs and arguments of counsel having been duly considered, because it is the opinion of the Court (Associate Justices Smith, Norvell and Hamilton dissenting) that there was no error in the judgment of the District Court, signed and entered on the 26th day of April, 1965, it is, therefore, *ordered, adjudged* and *decreed* that the judgment of the District Court be, and hereby is, affirmed.

It is further ordered that appellants, Railroad Commission of Texas, (and the members thereof in their official capacities) Aluminum Company of America, Crown Central Petroleum Corporation and Pocantico Oil & Gas Corporation, pay all costs in this cause expended and incurred in this Court, and that this decision be certified to the District Court of Travis County, Texas, for observance.

APPENDIX C

IN THE SUPREME COURT OF TEXAS
AUSTIN

July 27, 1966

No. A-10,825.

RAILROAD COMMISSION OF TEXAS ET AL. v. WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL.	Direct Appeal from Travis County

Appellants' motion for rehearing, filed in the above numbered and entitled cause on June 29, 1966, having been duly considered, it is ordered that said motion be, and hereby is, overruled.

APPENDIX D

IN THE SUPREME COURT OF TEXAS

No. A-10,825

RAILROAD COMMISSION OF TEXAS ET AL. *Appellants* v. WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL. *Appellees*	On Direct Appeal from Travis County, Texas

This is another controversy between operators with wells on large tracts and those with wells on small tracts in the Appling Gas Field in Calhoun and Jackson Counties. Substantially the same parties have been before us on two previous occasions. In the first case it was held that each of the vertically separated reservoirs underlying the Field was to be considered as a separate reservoir in determining the right to a Rule 37 exception. The action of the Railroad Commission in allowing a small tract operator to make multiple completions from a single well bore in the gas sands under her property was upheld, even though production from one sand would have enabled her to recover more than the quantity of gas under her land. Benz-Stoddard v. Aluminum Company of America, Tex. Sup. 368 S.W. 2d 94. In the second case it was held that the large tract operators were precluded by lapse of time from attacking the ⅓-⅔ formula established by the Commission for allocating production from the field, even though use of the formula allowed the wells on small tracts to drain substantial quantities of gas from the larger units.

Railroad Commission of Texas v. Aluminum Company of America, Tex. Sup., 380 S.W. 2d 599. The question to be decided now is whether the Commission may, for the purpose of protecting correlative rights, establish a ceiling on the monthly allowable of gas to be produced from a reservoir.

By Special Order No. 2-53,009 dated February 1, 1965, the Commission prescribed a formula to be used in determining the maximum reasonable market demand for five reservoirs in the Appling Field. This suit was instituted by Woods Exploration & Producing Co., Inc. et al against the Commission to test the validity of the order and enjoin its enforcement. Ben Novak and others who are interested in small tract wells intervened as plaintiffs, while Aluminum Company of America and other large tract operators intervened and aligned themselves with the Commission. After the trial court rendered summary judgment in favor of the plaintiffs, declaring the order invalid and enjoining the Commission from enforcing the same, the Commission and the large tract operators prosecuted a direct appeal to this Court as authorized by Article 1738a.[1]

The question presented for decision is relatively narrow, but a rather full statement is necessary to an understanding of the contentions made by the parties. Section 12 of Article 6008 provides that the Commission shall fix the monthly allowable of gas to be produced from a reservoir "at the lawful market demand therefor or at the volume that can be produced from such reservoir without waste, whichever is the smaller quantity." It then directs that the monthly reservoir allowable be allocated among the wells entitled to produce from the reservoir so as to give each

[1] All statutes are referred to by the article number under which they appear in Vernon's Annotated Texas Civil Statutes.

well its fair share of the gas to be produced, with the proviso that each well shall be restricted to the amount of gas that can be produced without waste. These and other provisions of Article 6008 will be adverted to later in this opinion.

The usual procedure for fixing the monthly gas allowable for a reservoir is set out in Statewide Rule 31. Under its provisions market demand is ordinarily determined primarily on the basis of Producers' Forecasts filed with the Commission by operators having wells completed in the reservoir. These nominations state the volume of gas which each producer expects to be able to market from his wells the following month, and an operator may forecast any amount he desires provided it does not exceed the delivery capacity of his wells. If the Commission concludes that use of the forecasts does not result in a correct determination of reasonable market demand for the reservoir, it takes into account other pertinent facts such as average production for the previous twelve months or nominations filed by purchasers of gas. The power to do so is expressly recognized by Statewide Rule 31.

Under the provisions of Article 6008 mentioned above and where waste is not involved, market demand as determined by the Commission becomes the monthly reservoir allowable. The allocation formula applicable to the field is then used to divide the reservoir allowable among the wells entitled to produce from the reservoir. In the case of the Appling Field, this is the ⅓-⅔ formula we refused to strike down in Railroad Commission of Texas v. Aluminum Company of America, supra. Subject to any inequities inherent in the allocation formula, each well thus receives its fair share of the gas produced provided all wells are capable of producing their allowables. A well incapable of producing the allowable that would normally be assigned to it is

known as a limited capacity well. Under prevailing Commission procedures, limited capacity wells are assigned the maximum allowables they can produce, and the remainder of the allowables they would otherwise be entitled to receive are allocated to other wells in the field.[2] This brings us to the problem dealt with by the Commission in its Special Order No. 2,53,009. There is no dispute as to any of the material facts. Waste is not involved in the case, and there is nothing in the record to suggest that any gas produced from the Appling Field has been devoted to unlawful uses.

As indicated above there are a number of vertically separated reservoirs in the Appling Field. Five of these reservoirs are covered by the Commission's order here in issue. One of them, the Middle Kopnicky, is the deepest and by far the largest and most productive reservoir in the Field. It originally contained more than 360 billion cubic feet of gas. Each of the other four reservoirs covered by the order overlies the Middle Kopnicky and originally contained between 3 and 4½ billion cubic feet of gas. Under Rule 37 exceptions granted by the Commission, appellees and other town lot lessees were permitted to drill numerous wells on small tracts, most of them containing approximately 1/10 of an acre, and to make multiple completions from a single well bore in each of the several reservoirs underlying their lots.

The small tract wells have delivery capacities similar to those of the wells located on large tracts. A 1961 study disclosed that drainage was taking place from the Middle Kopnicky to the smaller upper zone sands through well bore communication in the wells with multiple completions. This

[2] Appellees say, and appellants do not deny, that this method of determining the amount each well may produce is expressly sanctioned and required by the provisions of Rule 5, which established the ⅓-⅔ allocation formula for the Appling Field.

well bore communication distorted the producing capability of the upper zone well completions and thus enabled the operators to file forecasts far in excess of what the true delivery capacity of the wells would have been in the absence of such communication. It had that effect because, as pointed out above, the amounts of the forecasts are limited only by the delivery capacities of the wells.

The ⅓-⅔ allocation formula in itself gave the small tract wells a tremendous drainage advantage over the larger gas units. Prior to the adoption of the order now in question, the Commission determined that operators of many wells on small tracts were following the practice of filing forecasts at or near the full delivery capacity of their wells. These forecasts, when combined with those filed by other operators and handled in accordance with the usual Commission procedure outlined in Statewide Rule 31, resulted in the assignment of very large reservoir allowables. The reservoir allowables were so great that the large tract wells, even though they had normal or even maximum delivery capacities, were incapable of producing the allowables representing their fair share of the gas as determined by allocation formula. They were accordingly classified as limited capacity wells and assigned the maximum allowables they were capable of producing; the remainder of the allowables to which they were entitled under the allocation formula was reallocated among the town lot wells. This enabled the latter to produce far more of the reservoir allowable than their share as determined by the basic ⅓-⅔ allocation formula, and the drainage advantage which the small tract operators already enjoyed by virtue of the formula itself was thus substantially enhanced.

An example will serve to illustrate the problem. One of the reservoirs in the Appling Field is designated as Segment 5, 7500′, and 18 wells were completed therein. Seven-

teen of these wells were located on 7.132 acres, while the remaining well was situated on a 328-acre unit. Since the 17 small tract wells have a large aggregate delivery capacity, their operators were able to make correspondingly large forecasts for the month of July, 1964. The total delivery capacity of all 18 wells was approximately 898,000 MCF per month, and the production forecasts resulted in the determination that reasonable market demand, and hence the reservoir allowable, for the month was approximately 880,000 MCF. Under the basic ⅓-⅔ allocation formula, the large tract well was entitled to an allowable of 591,000 MCF, but the productive capacity of the best well completed in the reservoir was approximately 87,000 MCF per month. The productive capacity of the single large tract well was only about 34,000 MCF, and in accordance with the usual Commission procedures some 557,000 MCF were allocated to the town lot wells for the one month in addition to their shares of the reservoir allowable as determined by application of the ⅓-⅔ formula.

Aluminum Company of America requested the Commission to amend Statewide Rule 31 as applied to the Appling Field by either (1) establishing a formula for computing the maximum quantity of gas that might constitute market demand for a reservoir, or (2) discontinuing the practice of reallocating the excess allowables of limited capacity wells. The Commission chose the first alternative and entered Special Order No. 2-53,009 adopting Field Rule 11, the relevant portions of which are quoted in the margin.[3]

---

[3] "Rule 11: a. The reasonable market demand for the Appling, Segment 5, 7500'; the Appling, Segment 6, 7500'; the Appling, Segment 6, 7600'; the Appling, Segment 6, 7600', Lower; and the Appling, Segment 'A' Kopnicky, Middle Fields, Jackson and Calhoun Counties, Texas, shall be allocated to each well in each field in accordance with the allocation formula for such field.

This is the order now under attack. Its effect is to establish as a ceiling on reasonable market demand the quantity of gas which, when fixed as the monthly reservoir allowable, would permit the well on the largest proration unit, if its delivery capacity were equal to the largest delivery capacity of any well in the reservoir, to receive an allowable it would be capable of producing.

It is unnecessary for us to consider some of the arguments advanced by appellees in support of the trial court's judgment. As we view the case, the basic issue is whether the procedure for determining maximum market demand established by Rule 11 is beyond the authority delegated to the Commission by the Legislature in Article 6008. Appellees rely primarily upon the provisions of Section 12 mentioned above. It is their contention that the statute requires the Commission to determine lawful market demand and then, where waste is not involved, set the reservoir allowable at the amount of the market demand so determined. They insist that Rule 11 is invalid because it fixes an arbitrary limit based upon factors which have nothing to do with market demand.

Appellants emphasize Sections 1 and 22 of Article 6008, which provide as follows:

> "Sec. 1. In recognition of past, present, and imminent evils occurring in the production and use of natural gas, as a result of waste in the production and use

---

b. The daily reasonable market demand for gas for each of the mentioned fields shall be the lesser gas volume figure as determined *either* by summation of nominated volumes taken from producers' forecasts, *or* by dividing the reported productive capability as shown on the GWT-2 test of the well exhibiting the greatest ability to deliver gas to normal gathering facilities by the participation factor of the largest proration unit.

c. The monthly reasonable market demand for gas shall be determined by multiplying the daily reasonable market demand by the number of days in the month."

thereof in the absence of correlative opportunities of owners of gas in a common reservoir to produce and use the same, this law is enacted for the protection of public and private interests against such evils by prohibiting waste and compelling ratable production.

"Sec. 22. The Commission shall be vested with a broad discretion in administering this law, and to that end shall be authorized to adopt any and all rules, regulations or orders which it finds are necessary to effectuate the provisions and purposes of said law."

They say that the remainder of the statute, and particularly the sections upon which appellees rely, must be construed in the light of these provisions. Since the declared purpose of the law is the protection of public and private interests by prohibiting waste and compelling ratable production, they contend that the Commission may properly consider the protection of correlative rights as one of the relevant factors in determining reasonable market demand. The Commission takes the position, therefore, that reasonable market demand is the total figure that allows each operator to produce his fair and allocated share of gas from a common reservoir within the framework of the exisiting allocation formula. Appellants further insist that the reservoir allowable and the individual well allocations are necessarily intertwined and constitute inseparable parts of a single whole. They point out that a reservoir allowable is not reasonable if it results in unreasonable well allocations, and from this premise they argue that the determination of reasonable market demand must be left to the discretion of the Commission so that unique situations such as that existing in the Appling Field can be handled through special regulation.

Appellants make a strong case for granting the Commission power to consider correlative rights in establish-

ing a reasonable reservoir allowable, but our problem is to determine whether the Legislature has done so. From a reading of Article 6008 and other statutes in pari materia therewith, we agree with appellants that the term "lawful market demand" as used in the third and fourth sentences of Section 12 means reasonable market demand for lawful uses. After considering all the provisions of Article 6008, however, it seems clear to us that the Legislature did not intend to authorize production from a reservoir to be limited to less than reasonable market demand except for the prevention of waste.[4]

Section 10 of the statute makes it the duty of the Commission to regulate daily gas well production "in the manner and method herein set forth." The Commission is then directed in general terms to prorate and regulate produc-

[4] This conclusion is further supported by the history of our oil and gas conservation laws. The first Texas statute prohibited waste and authorized the Commission to "do all things necessary for the conservation of oil and gas." Acts 1919, 36th Leg., p. 285, ch. 155. It was only after extended controversy that the Legislature adopted the so-called "Market Demand Act" in 1932. Acts 1932, 42nd Leg., 4 C.S., p. 3, ch. 2. This was preceded by the "Anti-Market-Demand Act," which provided that waste "shall not be construed to mean economic waste, and the Commission shall not have power to attempt by order, or otherwise, directly or indirectly, to limit the production of oil to equal the existing market demand for oil." Acts 1932, 42nd Leg., 1 C.S., p. 46, ch. 26. Governor Sterling is reported to have declared that he would veto a bill which authorized limitation of production to reasonable market demand, because he was interested only in preventing physical waste and could not see how limitation of production to reasonable market demand would have the effect of preventing waste. See Hardwicke, Legal History of Proration of Oil Production in Texas, Texas Law Review, 1937 Bar Association Number, p. 99. Against this background, it is rather difficult to believe that when the Legislature finally authorized the Commission to limit production to reasonable market demand, it meant that an even lower figure might be set whenever the Commission concluded that the same would constitute a reasonable reservoir allowable under all the circumstances.

tion for the protection of public and private interests in the prevention of waste and the adjustment of correlative rights, but the Legislature did not stop with this general grant of authority. Section 11 tells us when the powers granted by Section 10 may be exercised. The Commission is instructed there to regulate and prorate production for the protection of correlative rights "when evidence introduced at a hearing to be held as herein provided will support a finding made by the Commission" that potential production is in excess of reasonable market demand. This is a rather clear indication of the legislative intent that the Commission is not to be concerned with correlative rights unless it does make such a finding. It thus appears that the Commission was not intended to have the broad authority and discretion suggested by the provisions of Sections 1 and 22.

The second sentence of Section 12 provides that when the Commission finds that waste exists or is imminent or that the productive capacity of the wells exceeds market demand, it "shall then proceed by proper order to prorate and regulate the gas production from such reservoir on a reasonable basis." If the Legislature had intended for the Commission to fix as the reservoir allowable any amount that might be reasonable under all the circumstances, Section 12 probably would not have gone beyond the first two sentences. See Rudman v. Railroad Commission of Texas, 162 Tex. 579, 349 S.W. 2d 717. Instead of stopping at that point, however, the lawmakers spelled out in some detail how the Commission's duty to regulate gas production is to be performed. It is directed to determine each month: (1) the lawful market demand for gas to be produced from the reservoir during the following month; and (2) the volume of gas that can be produced from the reservoir and from each well therein during such month without waste. The

statute then provides in plain language that the monthly reservoir allowable of gas shall be fixed at the lawful market demand therefor or at the volume that can be produced without waste, whichever is the smaller quantity. In allocating the reservoir allowable among the wells, the Commission is authorized by Section 13 to consider the size of the tracts, the productive capacity of the wells, and "all other factors which are pertinent." It seems rather significant then that the Commission was not given similar authority in fixing the reservoir allowable.

The Legislature undoubtedly contemplated that each well would receive its fair share of the gas produced, but it also specified the means by which that end is to be accomplished. In our opinion the fixing of the reservoir allowable is controlled by the clear and explicit terms of Section 12, and the authority granted to the Commission in that respect is not enlarged by the more general provisions of Sections 1 and 22. "The correction or relaxation of the Section 12 requirements is a legislative matter if the allowables fixed by the Commission pursuant thereto are seriously fallible." Rudman v. Railroad Commission of Texas, supra.

In adopting the order now in question, the Commission has set an arbitrary limit on reasonable market demand for gas from the reservoir and hence upon the reservoir allowable. The limit is based upon factors which have nothing to do with market demand, and we agree with the trial court that the order is beyond the power delegated to the Commission by the Legislature. Appellants point out that Rule 11 will serve to reduce or eliminate any distortion in the reservoir allowables resulting from well bore communication or exorbitant forecasts, but this is purely incidental. The formula prescribed thereby is not related in any way to the quantity of gas passing between the reservoirs or

to the amount by which the forecasts might be regarded as excessive.

We do not mean to suggest that reasonable market demand must always be fixed at the mathematical total of the Producers' Forecasts for the month. Use of these nominations is merely an administrative device, and the Commission may consider and give appropriate weight to all facts that are relevant to a determination of reasonable market demand.

Appellants cite Railroad Commission of Texas v. Rowan Oil Co., 152 Tex. 439, 259 S.W. 2d 173, Corzelius v. Harrell, 143 Tex. 509, 186 S.W. 2d 961, and Brown v. Humble Oil & Refining Co., 126 Tex. 296, 87 S.W. 2d 1069. The opinions in these cases contain general expressions regarding the discretion vested in the Commission and its power to regulate production to protect correlative rights, but none of them throws any light on the question now before us. Appellants also direct our attention to the opinion in *Benz-Stoddard,* where it was said that the validity of Rule 37 and the exception thereto is based upon the principle that the Railroad Commission can so regulate the flow of gas that no unreasonable hardship need result from its application. We adhere to that view, but this Court is not authorized to enlarge the powers granted to the Commission by the Legislature.

It is also argued that the summary judgment was improper because there is no showing that the reservoir allowable determined for any month by use of the procedure provided in Rule 11 was less than the actual reasonable market demand for that month. Appellants cite Railroad Commission of Texas v. Houston Natural Gas Corp., 155 Tex. 502, 289 S.W. 2d 559, as supporting this argument. In that case a rate established by the Commission was attacked

as confiscatory, and we held that the manner in which the Commission arrived at its results was not material if the rate actually yielded a fair return. The decision might be in point if the present suit had been brought for the purpose of questioning the reservoir allowable fixed for a particular month, but here we are concerned with an order which prescribes the use of an illegal method for determining the allowable at all times in the future. The order is subject to attack even though the reservoir allowable calculated in accordance with its provisions for a certain month might not be substantially more or less than the reasonable market demand for gas from the reservoir.

The judgment of the trial court is affirmed.

.....

Ruel C. Walker
Associate Justice

Associate Justices Smith, Norvell and Hamilton dissenting.
Opinion delivered June 22, 1966.

APPENDIX E

IN THE SUPREME COURT OF TEXAS

NO. A-10825

RAILROAD COMMISSION OF TEXAS ET AL., *Appellants* v. WOODS EXPLORATION AND PRODUCING COMPANY, INC., ET AL., *Appellees*	On Direct Appeal from Travis County, Texas

DISSENTING OPINION

I respectfully dissent. By Special Order No. 2-53,009 dated February 1, 1965, the Commission prescribed a formula to be used in determining the maximum reasonable market demand for *five reservoirs* in the Appling Field. Woods Exploration & Producing Co., Inc., et al., instituted this suit against the Commission to test the validity of the order and enjoin its enforcement. Ben Novak and others intervened as plaintiffs. Claire Benz-Stoddard intervened as plaintiff. Aluminum Compay of America, Crown Central Petroleum Corporation and others intervened as defendants and aligned themselves with the Commission in an effort to uphold the order.

Plaintiffs and defendants filed motions for summary judgment. The trial court sustained plaintiffs' motion and entered a judgment that ". . . the ruling of the Railroad Commission on November 4, 1964 and the formal order thereon by the Railroad Commission dated February 1, 1965, being Special Order #2 53,009, effective December 1,

1964, adopting a new procedure for determing the maximum limit on the daily reasonable market demand from the five gas reservoirs, being Appling (Seg. 5) 7500′ field, and the Appling (Seg. 6) 7500′ field, the Appling (Seg. 6) 7600′ field, and the Appling (Seg. 6) 7600′ lower field, and the Appling (Seg. A) Middle Kopnicky Field, situated in Calhoun County, Texas, is not within the statutory authority of the Railroad Commission under Sections 10, 11, and 12, Article 6008, R.C.S. and the undisputed facts and is therefore null and void."

This Court has upheld the trial court judgment. This action of the Court effectively withdraws from the Commission the power granted it by the Legislature to consider correlative rights in establishing a reasonable reservoir allowable. I do not agree with the Court that Article 6008[1] or any section thereof either expressly or by implication withholds from the Commission the power to adjust correlative rights. The history of Article 6008 and other statutes in pari materia does not warrant the drastic holding made herein. I will agree that the Court has narrowed the question, but the result reached is destructive in that it takes from the Commission every semblance of power that this Court has in past decisions recognized that it possessed. The Rudman opinion is the Court's principal authority. That case, as I will later demonstrate, involved no issue concerning the fixing of the field allowable for the field there involved. The plaintiffs cite authorities[2] which have no application here. Those are cases wherein the definition of

[1] All statutes are referred to by the article number under which they appear in Vernon's Annotated Texas Civil Statutes.

[2] Danciger Oil & Refining Co. of Texas v. Railroad Commission of Texas, Tex. Civ. App. 49 S.W. 2d 837 (1932) reversed at 122 Tex. 243, 56 S.W. 2d 1075 (1933); Railroad Commission v. Continental Oil Co., 157 S.W. 2d 695 (Tex. Civ. App. 1941, err. refused, w.o.m.); Colorado Interstate Gas Co. v. The State Corporation Commission of Kansas, 386 P. 2d 266 (1964).

market demand was reached in dealing with statutes relating to market demand for oil. The market demand for oil is usually determined on a *state-wide basis* pursuant to Article 6049(d), Section 6, and Article 6014, rather than on a field-wide or reservoir basis pursuant to Article 6008.[3]

---

[3] Art. 6008. "Sec. 1. In recognition of past, present, and imminent evils occurring in the production and use of natural gas, as a result of waste in the production and use thereof in the absence of correlative opportunities of owners of gas in a common reservoir to produce and use the same, this law is enacted for the protection of public and private interests against such evils by prohibiting waste and compelling ratable production.

"* * * *

"Sec. 12. It shall be the duty of the Commission to determine the status of gas production from all reservoirs in this state. If and when the Commission finds that waste exists or is imminent in the production of gas from any reservoir, or that the capacity of the wells to produce gas from any reservoir exceeds the market demand for gas from such reservoir, the Commission shall then proceed by proper order to prorate and regulate the gas production from such reservoir on a reasonable basis. On or before the 20th day of each month, the Commission, after notice and hearing, shall determine (1) the lawful market demand for gas to be produced from each such reservoir during the following month; and (2) the volume of gas that can be produced from such reservoir and each well therein during the following month, without waste. The Commission shall then fix the monthy reservoir allowable of gas to be produced from such reservoir at the lawful market demand therefor or at the volume that can be produced from such reservoir without waste, whichever is the smaller quantity. The monthly reservoir allowable shall be allocated among all wells entitled to produce gas therefrom so as to give each well its fair share of the gas to be produced from the reservoir, provided that each well shall be restricted to the amount of gas that can be produced from it without waste. The volume of gas so allocated to each well shall be regarded as the monthly allowable for such well. The daily market demand for gas, and the daily allowable, shall be determined by dividing the monthly demand and the monthly allowable by the number of days in the month.

"* * * *

"Sec. 22. The Commission shall be vested with a broad discretion in administering this law, and to that end shall be authorized to adopt any and all rules, regulations or orders which it finds are necessary to effectuate the provisions and purposes of said law."

Sections 1 and 22, especially, and even Section 12, do not limit the power of the Commission to enter only such orders as prevent waste. To the contrary the Article specifically directs the Commission to give consideration to protection of correlative rights.

The Commission was confronted with the type of evil mentioned in Section 1 when it adopted the order under consideration. The Commission realized that the undisputed facts warranted action to protect correlative rights and that without the order some of the owners of gas in the reservoirs here involved would not be able to obtain their fair share and would not be able to *produce* and *use* their fair share of the gas in the five reservoirs described in the order. Since the facts are undisputed, I deem it sufficient to state here excerpts from the affidavits of Kenneth B. Ford, affidavits 1 and 2 of Bob R. Harris and the affidavit of James E. Werner, all of which were attached to and in support of Defendants' motion for summary judgment.

Kenneth B. Ford's affidavit dated April 24, 1965, gives the following summation which shows the true picture at the time of entry of the order under attack.

> "13. My study of producer's forecasts, allowables, and production for small tract wells (two acres or less) in these five reservoirs shows that at the present time [April 24, 1965] and for the past several years, these operators of small tract wells, with few exceptions, have been nominating and/or receiving allowable for and/or producing each month more gas than was originally in place under their tracts in these reservoirs.
>
> "14. Based on the facts presented in this Affidavit, it is clear that the special conditions that exist in these five Appling Field Reservoirs do not exist outside the Appling Field in any reservoir in Railroad Commission Districts 2, 3 and 4 and that statewide procedure as outlined in Statewide Rule 31 is not adequate for

these special conditions. For this reason, Special Field Rule 11 written by the Commission is reasonably necessary for effective and fair regulation in these fields."

Ford's affidavit refers to information received from James E. Werner, Senior Geologist, since January, 1956. Werner's affidavit, attached to Railroad Commission's motion for summary judgment, recites that he had made an extensive study of all geological data in the Appling Fields, including induction electric logs on all wells, and micrologs, core analyses, formation test results, sonic logs and formation density logs from all wells where such logs, tests and analyses were obtained.

Affidavit No. 2 by Bob R. Harris, an employee of the Railroad Commission states:

"The Aluminum Company of America application was to amend the Commission's procedure for determining maximum reasonable market demand for *all reservoirs* in the Appling Fields, but the evidence submitted at that time was not sufficient in the opinion of the Commission to justify applying it to all reservoirs. This is the reason the order applied only to the 5 reservoirs covered by the order."

Werner's affidavit states:

"I have prepared structure maps of the productive area of the gas reservoirs referred to below [the five involved] based on this study, and have determined by planimeter the number of productive acres in each reservoir. The results of this are set out below."

Werner's affidavit shows the results of these tests to be as follows:

"APPLING (SEGMENT A,
KOPNICKY, MIDDLE) FIELD

"The Appling (Segment A, Kopnicky, Middle) Field is the deepest reservoir in the Appling Fields, and also

by far the largest. The other productive reservoirs, including those referred to below, lie above the Middle Kopnicky Sand. In my opinion, this reservoir originally contained 4,288 productive surface acres, of which Aluminum Company of America, Crown Central Petroleum Corporation and Pocantico Oil & Gas Corp. (Alcoa et al) have approximately 3,702 acres under lease. I have prepared an isopach map of the original net effective sand which is productive of gas in this reservoir, which was furnished to Mr. Kenneth B. Ford, a petroleum reservoir engineer, to enable him to determine net effective acre feet of productive sand.

"APPLING (SEGMENT 5, 7500') FIELD

"In my opinion, the Appling (Segment 5, 7500') Field is a reservoir originally containing 435 productive surface acres, of which Alcoa et al have under lease approximately 385 acres. I have determined the net productive sand thickness in each of the wells in this reservoir and furnished this information to Mr. Kenneth B. Ford.

"APPLING (SEGMENT 6, 7500') FIELD

"In my opinion, the Appling (Segment 6, 7500') Field is a reservoir originally containing 352 productive surface acres, of which approximately 310 acres are under lease to Alcoa et al. I have determined the net productive sand thickness in each of the wells in this reservoir and furnished this information to Mr. Kenneth B. Ford.

"APPLING (SEGMENT 6, 7600') FIELD

"In my opinion, the Appling (Segment 6, 7600') Field is a reservoir originally containing 485 productive surface acres, of which 443 acres are under lease to Alcoa et al. I have determined the net productive sand thickness in each of the wells in this reservoir and furnished this information to Mr. Kenneth B. Ford.

"APPLING (SEGMENT 6, 7600', LOWER) FIELD

"In my opinion the Appling (Segment 6, 7600', Lower) Field is a reservoir originally containing 525 productive surface acres, of which 481 are under lease to Alcoa et al. I have determined the net produtive sand thickness in each of the wells in this reservoir and furnished this information to Mr. Kenneth B. Ford."

The Harris affidavit no. 1 as well as the affidavits heretofore discussed, vividly portray the probable imminent evils contemplated in Section 1, Article 6008, supra, which would have resulted had the Commission elected to continue the normal procedure of determining the monthly allowable for each prorated gas reservoir in the Appling Fields area. The Commission was confronted with the necessity of determining whether to continue utilization of the procedures set out in State-wide Rule 31 (c) and (e) or whether to discard the normal procedure and adopt in its place a method which under the undisputed evidence would adequately protect correlative rights and a method "deemed necessary to restrict the production of gas to an amount equal to market demand as is required of the Commission by the statutes." See the Exception in Rule 31. This was a special condition and the market demand order relates solely to the five Appling Field reservoirs. The Railroad Commission expressly found and recited in the order under attack that:

"From evidence adduced at said hearing, it was apparent to the Commission that procedure in use for determining the market demand for gas from the mentioned fields provided a means by which an operator could distort the market demand determination to such an extent that Commission proration and ratable take orders were rendered completely ineffective; that the resulting injury to correlative rights could be adjusted by modifying the market demand procedure; that the suggested alteration in the procedure for determination

of reasonable market demand as modified by the Commission would reduce the ability to manipulate and distort the reasonable market demand determination for the fields."

This Court should bear in mind that the order under attack was not entered as the result of our holding in the case of Railroad Commission of Texas v. Aluminum Company of America, supra. The market demand order is in no sense an attempt to circumvent our decision. The plaintiffs' claim that such is the purpose of the order is wholly unfounded. The Railroad Commission order in the Aluminum Company case was effective January 30, 1961, whereas the Railroad Commission order in the present case was issued effective December 1, 1964. The order under attack is based on occurrences after January 30, 1961. The Railroad Commission order in Aluminum was entered on the basis of facts and conditions which existed on January 30, 1961, when the order became effective. When the order under attack was entered many material changes had occurred between January 30, 1961, and May, 1964. The prior order did not and could not adjudicate conditions existing on December 1, 1964, or the validity of an order effective on that date.

The hearing which preceded the adoption of the order under attack was held on December 5 and 6, 1963. On November 4, 1964, the Commission ordered its adoption, effective December 1, 1964. The Examiner, who conducted the hearing for the Railroad Commission, determined from an examination of the producers forecasts allowable schedules, production reports and well test reports filed with the Commission by operators of many wells on small tracts, that they were following the practice of filing producers forecasts, combined with the forecasts of the other operators, causing the customary (Rule 31) Commission pro-

cedure for determining allowables to result in classification of wells located on larger tracts as limited capacity wells (wells unable to produce the allowable which would normally be assigned thereon), and the small tract wells received allowables for greater than the *share of reservoir allowable* they would have received pursuant to the ⅓ per well — ⅔ acreage allocation formula in effect in the field.

The undisputed evidence conclusively establishes that in order to protect correlative rights, the Commission not only had the power under authority of the Legislature to adopt the order, but it would have been derelict in its duty if it had failed to so act. I think this case presents a state of facts which the Legislature intended for the Commission to adjust so as to ultimately give to each operator, small or large, his fair share of the gas in the reservoir. The condition here, so far as correlative rights are concerned, are analogous to the conditions described in the cases of Brown v. Humble Oil & Refining Company, 126 Tex. 296, 87 S.W. 2d 1069, 1070 (1935); Corzelius v. Harrell, 143 Tex. 509, 186 S.W. 2d 961 (1945); Gulf Land Co. v. Atlantic Refining Co., 134 Tex. 59, 131 S.W. 2d 73 (1939); Magnolia Petroleum Co. v. Railroad Commission, 128 Tex. 189, 96 S.W. 2d 273 (1936); Railroad Commission v. Manziel, 361 S.W. 2d 560 (Tex. 1962).

In these cases, the Court was concerned with the question of the extent the Legislature had clothed the Commission with the power to regulate oil and gas production under the Texas Conservation Statutes. In Corzelius v. Harrell, supra, this Court said:

> "The law under consideration states in detail the manner and method the Commission may follow in prorating and regulating the daily gas well production from each common reservoir. The Legislature recognized the difficulty of prorating and regulating the pro-

> duction of gas from a common reservoir. *To make sure that the Commission was not to be bound by any narrow, technical rules in carrying out the objects of this law, the Legislature was particular to give the Commission broad discretion in the exercise of its power under the provisions of this law.*" [Emphasis added.]

In Brown v. Humble, *supra*, on motion for rehearing, this Court emphasized the broad and liberal standards to be applied to the conservation orders of the Railroad Commission and stated that the duty is lodged with the Commission to make rules to carry out the mandates of the Legislature and to impartially enforce them. We further said that all rules and rulings of the Railroad Commission are presumed to be valid unless the contrary is made to appear.

These cases announce principles in keeping with repeated statutory declarations of the broad discretion vested in the Commission. See Section 22, Article 6008, *supra*. Another such statutory declaration is to be found in Article 6042, wherein it is provided:

> "Particular powers herein granted to the Commission shall not be construed to limit the general powers conferred by law, and until set aside or vacated by some order or decree of a court of competent jurisdiction, all orders of the Commission as to any matter within its jurisdiction shall be accepted as prima facie evidence of their validity."

In the case of Railroad Commission v. Rowan Oil Co., 152 Tex. 439, 259 S.W. 2d 173, 176 (1953), we said that:

> "All property is held subject to a valid exercise of the police power. That some operators will have a less profitable operation, be delayed in recovering their gas, or be in trouble with their creditors does not affect the

> Commission's duty to enforce conservation by preventing waste. Neither does it make the Commission's action arbitrary or confiscatory if correlative rights are protected."

As heretofore pointed out, Rule 31 itself expressly reserves the power of the Commission to make any modifications or adjustments that the Commission, in its discretion deems necessary to prevent waste *or to protect correlative rights.*

The Manziel case, *supra,* was one brought by the Manziels attacking a Railroad Commission order on the grounds that it would cause waste, that it would result in the confiscation of the Manziels' property, that the permit was not necessary to protect the correlative rights of the Whelans and that the order was in violation of the Commission's own rules. The Manziels contended that the Railroad Commission's order authorizing the Whelans to drill a well at an irregular location was violative of Article 6029(4). The Commission took the position that it must have the authority to grant the location of water injection wells to prevent drainage and to protect correlative rights. Here the Commission was confronted with a situation where it had adopted no field-wide spacing rule for water injection wells, but had made special orders as to each operator desiring to flood. In Manziel, we upheld the order of the Commission, saying:

> "The Commission has two primary duties in the administration and control of our oil and gas industry. It must look to each field as a whole to determine what is necessary to prevent waste while at the same time countering this consideration with a view toward allowing each operator to recover his fair share of the oil in place beneath his land. In carrying out these duties, there has devolved upon the Commission the power to

promulgate rules, orders and regulations that control the industry, and such are issued pursuant to the police power of the state, and that power may invade the right of the owner of the land to the oil in place under his land as long as it is based on some justifying occasion, and is not exercised in an unreasonable or arbitrary manner. See Brown v. Humble Oil and Refining Co., 126 Tex. 269, 83 S.W. 2d 935 (1935)."

In view of these repeated judicial and statutory declarations of the broad powers and discretions vested in the Railroad Commission by the Legislature, it is inconceivable that this Court at this late date would hold that the Commission has *no power* to fix the Appling Field allowable in a manner that will result in reasonable individual well allocations and some degree of increased protection for the correlative rights of the Intervenor-Defendants.

I find no case which sustains the plaintiffs in their contention that the Railroad Commission has *no power* to consider the protection of correlative rights or to employ methods designed to see that each individual well gets its *fair share* of the total production from the common gas reservoir in fixing allowables. The Commission is not strictly limited to the clerical function of running up the mathematical total of the producers' forecasts in determining the field allowable. The Court seems to indicate that the Rudman case, *supra,* so holds. I have hurriedly examined the Rudman record and feel safe in saying that it does not. That case merely holds that the field allowable must be determined in advance of the month to which it is applicable and that it cannot be determined retroactively after the month has expired.

At this time I forego writing upon the question of whether or not the Commission's and the other defendants' motions

for summary judgment should have been granted. I would, however, reverse the judgment of the trial court.

.....

Clyde E. Smith
Associate Justice

Associate Justices Norvell and Hamilton join in this dissent.
Opinion delivered: June 22, 1966.

APPENDIX F

IN THE SUPREME COURT OF TEXAS

No. A-10,825

RAILROAD COMMISSION OF TEXAS ET AL. *Appellants* v. WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL. *Appellees*	On Direct Appeal from Travis County, Texas

DISSENTING OPINION

I respectively dissent. The Court's opinion graphically sets out the mass confiscation of property and the gross injustice that results from an enforcement of Rule 31 prior to the amendment that is under attack here. According to Rule 31 before amendment the principal factor to be considered in determining reservoir market demand is the sum total of all gas which producers say they expect to produce the following month and submit on Producers' Forecasts.

What caused the rule to break down, resulting in the chaos described in the Court's opinion, was that producers of gas from small tracts (in most cases 1/10 of an acre) did not confine their forecasts to the volume of their own gas which they expected to produce the following month. In most of such cases a producer would say in effect that he had a sale for all the gas he could produce under the field proration formula, but in addition he could produce and sell more than ten times that much more gas belonging

to his neighbors. By taking the sum total of such Producers' Forecasts the Commission was not considering the market demand for gas which the producers had available for sale under the field proration formula as established by Rule 5, but was taking into consideration the gas of other owners, which the producers had no right to offer for sale or to produce. It is evident that consideration of this factor could not furnish any reasonable basis upon which the Commission could determine the true lawful market demand for gas to be produced from the reservoir under the existing regulations.

The Commission came to the conclusion that in considering and determining the market demand for gas to be produced from each reservoir that it should consider only so much of the Producers' Forecasts as would not exceed the amount of gas which producers could lawfully produce from the reservoir under the allocation formula set out in Rule 5. This is all that Rule 11, the amendment under attack here, seeks to accomplish. It adds another factor to be considered by the Commission in arriving at the lawful demand. It allows the Commission to determine market demand for the gas to be produced from the reservoir under regulation rather than for gas produced at full capacity of the wells.

The real question, then, before the Court is what gas does the Commission take into consideration in determining lawful market demand at its monthly hearings. Does it take into consideration gas to be produced at full capacity of the wells in each reservoir or gas to be produced from each reservoir under the field regulations then in existence? If we determine that the Commission is correct in considering only the gas that can be lawfully produced under the regulations already in existence at the time of its hearing,

then the problem with which the Court struggles in its opinion never does arise.

In determining whether the Commission is correct in its approach to this problem we must bear in mind that before the Commission ever had any right to exercise the broad powers the Legislature granted it to prorate and regulate the production of gas it first had to be determined that the capacity of the wells to produce gas from the reservoir in question exceeded the market demand for gas from such reservoir. This finding was made some years ago and the Commission proceeded as the statute directs by orders to promulgate rules and regulations governing the production of gas from each reservoir. These regulations established spacing rules and, for the reservoir in question, it established a 320-acre spacing unit rule with a proviso for exceptions to Rule 37, under which the Commission has granted 17 exceptions in order to prevent confiscation of gas. Then in order to prevent excess drainage from regular size units by these small units the Commission adopted Rule 5, which is the ⅓-⅔ proration formula, ⅔ of production based on acreage, and ⅓ on per well factor. It is this rule that automatically puts a limit on the maximum amount of gas which can be produced from each welll, and consequently a limit on the maximum of production of gas from each reservoir.

It is only after all these things have been done by the Commission that it then at the direction of the Legislature has a hearing on or before the 20th of each month to determine the lawful market demand for gas to be produced from each reservoir for the following month. The lawful producing capacity of each reservoir has already been determined. The Legislature necessarily had in mind that this would have been done before the Commission was called upon to determine the lawful market demand. It neces-

sarily follows that the Legislature, when it said "to determine the lawful market demand for gas to be produced", had in mind the gas to be produced under the regulations then in force.

All that Rule 11, the amendment under attack, does is to say that as to the Producers' Forecasts it will consider so much of the forecasts as does not exceed the amount which the producer can lawfully produce under the regulations in force. If they do not exceed such amount, then the Commission will fix the market demand at the sum total of the Producers' Forecasts. If they do exceed such amount, then the Commission will fix the lawful market demand at the maximum which the producers could produce under the regulations.

It can be seen that the Commission is not arbitrarily fixing the market demand, but is fixing it in the light of all the facts and circumstances before it at the time it is called upon to make the determination. The Commission considers not only the nominations of purchasers and Producers' Forecasts, but also the supply of gas that may be lawfully produced from the reservoir. All these factors bear on the lawful or reasonable market demand the Legislature had in mind when it directed the Commission to determine the lawful market demand for gas to be produced from the reservoir.

This Court, in making its holding, says:

> "In adopting the order now in question, the Commission has set an arbitrary limit on reasonable market demand for gas *from the reservoir* and hence upon the reservoir allowable. The limit is based upon factors which have nothing to do with market demand * * *." (Emphasis mine.)

In the first place, the statute does not direct the Commission to determine the reasonable market demand for gas

from the reservoir, but it is for the gas *to be produced* from the reservoir. This means a reservoir which is necessarily already under proration, or else the Commission would not be called upon by such statute to determine any market demand. Consequently, the market demand, with which we are concerned here, is for gas to be produced from the reservoir under proration. The Court is holding as a matter of law that the Commission cannot consider the supply of gas as is limited by proration in determining market demand, and has stricken the order of the Commission, which in effect says that the Commission will consider nominations and Producers Forecasts, but only to the extent that they do not exceed the maximum amount that can be produced under proration, as fixed by the Commission. This is a strange holding, in view of the fact that the Commission would have no power or authority whatever, in a case where waste is not involved, to determine market demand, unless it did relate to correlative rights. Any such order of the Commission establishing the factors to be considered in determining lawful market demand would be without authority if it did not concern correlative rights. Section 1, Article 6008, is as follows:

> "Sec. 1. In recognition of past, present, and imminent evils occurring in the production and use of natural gas, as a result of waste in the production and use thereof in the absence of correlative opportunities of owners of gas in a common reservoir to produce and use the same, this law is enacted for the protection of public and private interests against such evils *by prohibiting waste and compelling ratable production.*" (Emphasis mine.)

By this provision and others the Legislature has said in no uncertain terms that the Commission may promulgate orders and rules only when they have some reasonable relation to the prohibition of waste or the compelling of

ratable production among the owners of gas in a common reservoir. The Supreme Court of the United States, in Thompson v. Consolidated Gas Utilities Co., 300 U.S. 55, 57 S. Ct. 364, 371, 81 L. Ed. 510, in affirming the lower courts which had held invalid an order of the Texas Railroad Commission ostensibly issued under the authority of Article 6008, R. C. S., said this:

> "'Proration orders would not be valid if shown to bear no reasonable relation either to the prevention of waste or the protection of correlative rights, or if shown to be otherwise arbitrary."

The whole opinion of this Court shows that it misses the entire purpose and reason for the existence of Article 6008. The very basis of any power given the Railroad Commission is to prevent waste or to protect correlative rights. Consequently, in analyzing Section 12 of Article 6008, after the Commission has determined that facts exist which give it authority to proceed to prorate and regulate oil and gas production, then everything the Commission does thereafter under Section 12 has to be either related to correlative rights or waste. The Commission is given no authority to establish any rule or order which does not have some reasonable relation to one or the other. Consequently, when this Court says that Rule 11 which is under attack here is invalid because it has the effect of protecting correlative rights it is doing so in the face of the plain purposes and provisions of the statute.

The Court, in arriving at its holding, not only ignores the above-quoted Section 1 of Article 6008, but also ignores Section 22 of said article, which reads as follows:

> "Sec. 22. The Commission shall be vested with a broad discretion in administering this law, and to that end shall be authorized to adopt any and all rules,

regulations or orders which it finds are necessary to effectuate the provisions and purposes of said law."

It is interesting to note how the opinion treats the provisions of Sections 1 and 22 as mere suggestions and comes to the conclusion that the Legislature had no intention of giving the Commission the broad authority and discretion contained in the provisions of said sections. The Court reaches its conclusion through an analysis of Sections 10 and 11 of Article 6008, which read as follows:

"Sec. 10. It shall be the duty of the Commission to prorate and regulate the daily gas well production from each common reservoir in the manner and method herein set forth. The Commission shall prorate and regulate such production for the protection of public and private interest:

"(a) In the prevention of waste as 'waste' is defined herein;

"(b) In the adjustment of correlative rights and opportunities of each owner of gas in a common reservoir to produce and use or sell such gas as permitted in this Article.

"Sec. 11. The Commission shall exercise the authority to accomplish the purpose designated under item (a) of Section 10 when the presence or imminence of waste is supported by a finding based upon the evidence introduced at a hearing to be held as herein provided.

"The Commission shall exercise the authority to accomplish the purpose designated under item (b) of Section 10 when evidence introduced at a hearing to be held as herein provided will support a finding made by the Commission that the aggregate lawful volume of the open flow or daily potential capacity to produce of all gas wells located in a common reservoir, is in excess of the daily reasonable market demand for gas from

gas wells that may be produced from such common reservoir, to be utilized as permitted in this Article."

The Court, after noting the powers granted the Commission in Section 10 to regulate and prorate production for the protection of correlative rights "when evidence introduced at a hearing to be held as herein provided will support a finding made by the Commission", that potential production is in excess of reasonable market demand, it then makes this statement:

> "This is a rather clear indication of the legislative intent that the Commission is not to be concerned with correlative rights unless it does make such a finding."

That statement is just as true as it can be, but what the opinion fails to say is that the Commission did make that finding; it did become concerned with correlative rights; it did promulgate a proration order covering the reservoirs here involved, which is Rule 5, to protect correlative rights. Once the Commission made the finding that potential production is in excess of reasonable market demand all the broad powers and discretion conferred upon the Commission to prorate and regulate production of oil and gas came into effect. Yet the Court's opinion says that, because the Commission first had to make that finding, "It thus appears that the Commission was not intended to have the broad authority and discretion suggested by the provisions of Sections 1 and 22." It is difficult to see how the Court can conclude, from the reasons it gave, that the Legislature did not mean what it said.

I disagree with the Court's definition of "lawful market demand" as used in that part of the sentence in Section 12 as follows: "* * * shall determine (1) the lawful market demand for gas to be produced from each reservoir during the following month; * * *." The Court defines it as "reason-

able market demand for lawful uses." It does mean that, but it means more in the context in which it is used. I would add to the Court's definition "and lawfully produced." As stated above, there was in effect at the time the Commission promulgated the amendment now under attack a valid and subsisting proration order covering the reservoirs in question. This order is not under attack here and is still in force. Until set aside it has the effect of law. Section 16 of Article 6008 says: "It shall be unlawful for any person to produce gas from a gas well in violation of the valid orders of the Railroad Commission of Texas."

While the Court says that it does not mean to suggest that reasonable market demand must always be fixed at the mathematical total of the Producers' Forecasts for the month and that the Commission may consider and give appropriate weight to all factors that are relevant to the determination of reasonable market demand, they are rather empty words. The Court holds that the Commission may not consider correlative rights as a factor in the determination of market demand. In view of this holding of the Court there is no way in which the Commission can protect correlative rights. If Woods Exploration Company and a small pipe line can destroy correlative rights in the reservoirs in question it is unthinkable what larger pipe lines can do to gas fields all over this state wherever there are small tract owners located.

The Court says in effect that the Legislature gave broad powers to protect correlative rights to the Commission throughout the statutes on oil and gas but took it away with one stroke of the pen when it wrote this one phrase "shall determine (1) the lawful market demand for gas to be produced from each such reservoir during the following month; * * *." This in spite of the fact that the Legislature nowhere told the Commission what it must or must not

consider in determining lawful market demand. The effect of this holding is to destroy, in so far as gas fields in which there are small tract owners are concerned, the power of the Commission to protect correlative rights. This Court has said numerous times contrary to the present ruling that the Commission has broad powers in so prorating and regulating oil and gas production as to protect correlative rights. Railroad Commission v. Shell Oil Company, 380 S.W. 2d 556, at 559; Marrs v. Railroad Commission, 142 Tex. 293, 177 S.W. 2d 941; Gulf Land Co. v. Atlantic Refining Co., 134 Tex. 59, 131 S.W. 2d 73; Atlantic Refining Co. v. Railroad Commission, 162 Tex. 274, 346 S.W. 2d 801; Halbouty v. Railroad Commission, Tex., 357 S.W. 2d 364.

I would reverse the judgment of the trial court.

.....

Robert W. Hamilton
Associate Justice

RWH/p

Associate Justices Smith and Norvell join in this dissent.

Opinion delivered:

June 22, 1966

APPENDIX G

SUPREME COURT OF TEXAS

* * * * *

August 10, 1966.

No. A-10,825.

RAILROAD COMMISSION OF TEXAS ET AL. v. WOODS EXPLORATION AND PRODUCING COMPANY, INC. ET AL.	Direct Appeal From Travis County.

Appellants' motion to stay enforcement of mandate filed herein on August 8, 1966, having been duly considered by the Court, it is ordered that said motion be, and hereby is, granted.

It is ordered that the Clerk of the District Court of Travis County, Texas, return said mandate to the Clerk of the Supreme Court.

It is further ordered that the Clerk of this Court withhold issuance of mandate in this case for a period of ninety (90) days from July 27, 1966, and that execution and enforcement of the judgment entered herein on June 22, 1966, be stayed for such period, but not thereafter unless further delay of issuance of mandate and execution and enforcement of the judgment of this Court is ordered by the Supreme Court of the United States on petition made in that Court.

APPENDIX H

EXHIBIT 3
AFFIDAVIT OF BOB R. HARRIS
(Harris Affidavit No. 1)

THE STATE OF TEXAS }
COUNTY OF TRAVIS }

BEFORE ME, the undersigned authority, a Notary Public in and for said County and State, personally appeared BOB R. HARRIS, well known to me, and having been first duly sworn by me, upon his oath did depose and say:

1. I am Bob R. Harris. I am over 21 years of age and competent to testify to the facts herein set forth, and make these statements of my own knowledge.

2. I am a professional petroleum engineer and am a Registered Professional Engineer in Texas. I am employed by the Railroad Commission of Texas, and have been so employed for the past nine years. From March, 1960, to September, 1963, I was in charge of the Gas Proration Department of the Commission. I am now Director of Research and Inspection and still advise and direct certain phases of gas proration. I am familiar with the manner in which the Commission arrives at the monthly gas allowables to be assigned individual gas fields in Texas, and particularly the Appling (Segment 5, 7600′) Field, the Appling (Segment 6, 7500′) Field, the Appling (Segment 6, 7600′) Field, the Appling (Segment 6, 7600′, Lower) Field, and the Appling (Segment A, Middle Kopnicky) Field, all situated in Calhoun County, Texas. I am further generally familiar with producers nominations, volumes of gas produced and reported to the Commission, allowables

assigned, and the comparative size of these items in relation to the same items in other gas fields.

3. Normally the monthly gas allowable for each prorated gas reservoir in the Appling Fields area is determined pursuant to Commission Statewide Rules 31(c) and (e); a copy of which (Attachment "A") is attached to and made a part of this affidavit. However, in some cases the Commission has determined that the utilization of the procedures set out in Rule 31 does not result in a correct determination of market demand in accordance with Art. 6008, V.A.C.S. Pursuant to the exception in Rule 31 reading:

> "Nothing herein shall be interpreted, however, as binding on the Commission to the extent that any adjustment of nominations cannot be made which is deemed necessary to restrict the production of gas to an amount equal to market demand as is required of the Commission by the Statutes."

the Commission has in such cases discarded the procedure set out in Rule 31 and utilized in its place other methods, such as averaging of twelve previous months' production from the particular reservoir as was done in the Appling (Segment 2, 7500') Field, or acceptance and use of the nominations for gas purchases filed by purchasers of gas (as in the West Panhandle Field). In October, 1963, Aluminum Company of America, an operator of a number of Appling Fields wells, complained to the Commission that allowables assigned to certain reservoirs in the Appling Fields area, including the five referred to above, did not represent the reasonable market demand, as required by the applicable statutes. A hearing was held on this matter on December 5 and 6, 1963, at which I presided as Examiner. On November 4, 1964, the Commission ordered the adoption,

effective December 1, 1964, of a new procedure for determining a maximum limit on the allowable from the five gas reservoirs referred to above, as set out in its letter dated November 5, 1964, a copy of which (Attachment "B") is attached to and made a part of this affidavit. A copy of the description of the procedure involved which was referred to in such letter (Attachment "C") is also attached to and made a part of this affidavit. This order was supplemented by a formal Commission order, a copy of which (Attachment "D") is attached to and made a part of this affidavit, adopting this procedure as a new field rule with respect to the five reservoirs referred to above. Prior to this order, I reviewed the evidence submitted at the hearing and made an independent investigation on behalf of the Commission to verify the true condition in these five reservoirs. I determined from an examination of the producers forecasts, allowable schedules, production reports and well test reports filed with the Commission by operators of wells completed in these five reservoirs that operators of many wells on small tracts were following the practice of filing producers forecasts at or near the full delivery capacity of their wells, and that these forecasts, combined with the forecasts of the other operators, caused the customary Commission procedure for determining allowables to result in assignment of huge reservoir allowables, in turn this resulted in classification of wells located on larger tracts as limited capacity wells (wells unable to produce the allowable which would normally be assigned thereon), and the smaller tract wells received allowables far greater than the share of reservoir allowable they would have received pursuant to the ⅓ per well — ⅔ acreage allocation formula in effect in the field.

4. This situation has continued in these five reservoirs for many months. July, 1964, was a fairly typical month. My analysis (Attachment "E") of the allowables assigned in July, 1964, to the Appling (Segment 5, 7500') Field is attached to and made a part of this affidavit. The Crown Central State Tract No. 256 Well No. 2-UT was situated on the largest proration unit in this reservoir. This unit contained 328 acres, and only 335.132 acres were assigned to the 18 wells eligible to receive an allowable in that month, including the Crown Central Well. The 17 small tract wells developed a tremendous aggregate delivery capacity compared to the size tracts on which they were located. This delivery capacity enabled operators of these wells likewise to make nominations for gas production (Producers' Forecasts) which were tremendous when compared to the size tracts in which they were located. As a result of the aggregate Producers' Forecasts for July, 1964, the Crown Central well would have required a delivery capacity of approximately 591,000 MCF per month in order to produce its correct share of the reservoir allowable under the ⅓ well — ⅔ acreage allocation formula then in effect for this reservoir. No gas well in this field has demonstrated a capability of this magnitude. Hence the Crown Central well's excess allowable of more than 550,000 MCF of gas during July, 1964, was distributed to town lot wells, by application of the Commission's customary procedure for determining reservoir allowables. In each of the other four reservoirs, the well on the largest proration unit likewise suffered redistribution of allowable to smaller tract wells, as shown on the Commission's July, 1964, gas allowable schedule, copy of which (Attachment "F") is attached to and made a part of this affidavit. In all five reservoirs, the wells located on the largest proration units were receiving

less than the allowable which would be assigned under the 1/3 well — 2/3 acreage allocation formula. The 1/3 well — 2/3 acreage allocation formula itself establishes a drainage advantage in the town lot wells as compared to the large tract wells in these reservoirs. The Commission procedure for determining reservoir allowables virtually nullified the allocation formula, and increased the drainage advantage in the town lot wells.

5. The Commission's new procedure insures that a well on the largest proration unit in a reservoir, provided it has as great a delivery capacity as any other well in the reservoir, will not be penalized and classed as a "limited capacity" well because of gas nominations (Producers' Forecasts) made by operators of small tract wells completed in the reservoir. The maximum which is considered to be the reasonable market demand is that quantity of monthly reservoir gas production which would permit the well on the largest proration unit, provided its delivery capacity is equal to the largest delivery capacity of any well in the reservoir, to receive an allowable which it would be capable of producing. Attachment "E" demonstrates what allowables would have been assigned in July, 1964, had the new procedure been in effect for that month. While the Crown Central well did not have the maximum delivery capacity of any well in the field, had it had that capacity it would have received an allowable of 87,414 MCF for that month. Since its capacity was only 34,410 MCF per month, it would receive that allowable. This well's limited capacity, however, was not a limiting factor on the reservoir allowable. In fact, the top producing capacity well was the Novak-Bacon Town-Well No. 1-C, a small tract well. Under the operation of the Commission's amended procedure, any operator is free to retest at any time the delivery capacity

of his well; if he can retest such well at a higher rate than any other well in the field, then under this procedure, for the next succeeding month and thereafter until such time as some different maximum delivery capacity is established, that delivery capacity becomes the criterion for determining the maximum reasonable market demand. If, however, the total nominations are less than the maximum reasonable market demand, then such lesser amount is assigned as the reservoir's allowable. The Commission's new procedure does not prescribe the reasonable market demand for a gas reservoir, but simply places a top limit on it, beyond which point it is considered not to be the reasonable market demand.

Further Affiant sayeth not.

/s/ Bob R. Harris

SWORN TO AND SUBSCRIBED before me this 31st day of March, 1965.

(Seal)

/s/ E. A. Cox
Notary Public in and for
Midland County, Texas.

ATTACHMENT D
(to Harris Affidavit No. 1)

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

OIL AND GAS DOCKET
NO. 2-53,009

IN RE: CONSERVATION AND PREVENTION OF WASTE OF CRUDE PETROLEUM AND NATURAL GAS IN THE APPLING FIELDS, JACKSON AND CALHOUN COUNTIES, TEXAS

Austin, Texas

February 1, 1965

SPECIAL ORDER

AMENDING SPECIAL ORDER NO. 2-45,587 ISSUED EFFECTIVE JANUARY 30, 1961, AS AMENDED, BY THE ADOPTION OF AN ADDITIONAL RULE PERTAINING TO THE PROCEDURE FOR DETERMINING REASONABLE MARKET DEMAND FOR CERTAIN APPLING FIELDS, JACKSON AND CALHOUN COUNTIES, TEXAS

WHEREAS, After due notice the Railroad Commission of Texas held a hearing on December 5, 1963 concerning the application of Aluminum Company of America for an alteration in procedure for determining reasonable market demand for the Appling, Segment 5, 7500'; the Appling, Segment 6, 7500'; the Appling, Segment 6, 7600'; the Appling, Segment 6, 7600' Lower; and the Appling, Segment "A" Kopnicky, Middle Fields, Jackson and Calhoun Counties, Texas; and

WHEREAS, From evidence adduced at said hearing it was apparent to the Commission that procedure in use for determining the market demand for gas from the mentioned fields provided a means by which an operator could distort the market demand determination to such an extent that Commission proration and ratable take orders were rendered completely ineffective; that the resulting injury to correlative rights could be adjusted by modifying the market demand procedure; that the suggested alteration in the procedure for determination of reasonable market demand as modified by the Commission would reduce the ability to manipulate and distort the reasonable market demand determination for the fields; and

WHEREAS, From evidence adduced at said hearing and from a study made of the effect that the suggested alteration in procedure would have on the proration and ratable take orders the Commission is of the opinion and finds that the adoption of such a rule is reasonably necessary to effective fair regulation in such fields.

NOW, THEREFORE, IT IS ORDERED By the Railroad Commission of Texas that effective December 1, 1964, Special Order No. 2-45,587 issued effective January 30, 1961, as amended, be and it is amended by the adoption of an additional rule pertaining to the procedure for determining reasonable market demand for certain Appling Fields, Jackson and Calhoun Counties, Texas such additional rule to read and provide as follows:

RULE 11: a. The reasonable market demand for the Appling, Segment 5, 7500'; the Appling, Segment 6, 7500'; the Appling, Segment 6, 7600'; the Appling, Segment 6, 7600', Lower; and the Appling, Segment "A" Kopnicky,

Middle Fields, Jackson and Calhoun Counties, Texas shall be allocated to each well in each field in accordance with the allocation formula for such field.

b. The daily reasonable market demand for gas for each of the mentioned fields shall be the lesser gas volume figure as determined *either* by summation of nominated volumes taken from producers' forecasts, *or* by dividing the reported productive capability as shown on the GWT-2 test of the well exhibiting the greatest ability to deliver gas to normal gathering facilities by the participation factor of the largest proration unit.

c. The monthly reasonable market demand for gas shall be determined by multiplying the daily reasonable market demand by the number of days in the month.

IT IS FURTHER ORDERED That the remaining rules as stated in Special Order No. 2-45,587 are in no way altered nor amended by the provisions of this order.

It is expressly stated by the Commission that the issuance of this order shall not be considered to alter action taken by the Commission in another matter concerning the same fields at the same time, such action being temporarily suspended pending further investigation.

IT IS FURTHER ORDERED That this cause be held open on the docket for such other and further orders as may be necessary.

RAILROAD COMMISSION OF TEXAS

/s/ BEN RAMSEY
Chairman

/s/ JIM C. LANGDON
Commissioner

.....
Commissioner

ATTEST:

/s/ FRED OSBORNE
Secretary

[SEAL]

AFFIDAVIT OF BOB R. HARRIS
(Harris Affidavit No. 2)

THE STATE OF TEXAS }
COUNTY OF TRAVIS }

BEFORE ME, the undersigned authority, a Notary Public in and for said County and State, personally appeared BOB R. HARRIS, well known to me, and having been first duly sworn by me, upon his oath did depose and say:

1. I am Bob R. Harris. I am over 21 years of age and competent to testify to the facts herein set forth, and make these statements of my own knowledge.

2. I am a professional petroleum engineer and am a Registered Professional Engineer in Texas. I am employed by the Railroad Commission of Texas, and have been so employed for the past nine years. From March, 1960, to September, 1963, I was in charge of the Gas Proration Department of the Commission. I am now Director of Research and Inspection and still advise and direct certain phases of gas proration. Commencing in 1961, the Commission ordered a series of tests of all multiply completed wells in the Appling Fields in order to determine whether there was wellbore communication in any of these wells which would permit gas from one reservoir to be transferred through the wellbore in any such well to some other reservoir in which the well was completed and/or would permit gas from one reservoir to transfer through the well bore in any such well to the completion in another reservoir and be produced ostensibly as gas from such other reservoir; these tests are generally called packer leakage tests, although in fact, they are wellbore communication tests not limited to leaking packers. I have been in charge generally

of these tests for the Commission reviewing the results of the packer leakage tests run and reported to the Commission.

Attachment 1 to this Affidavit is a tabulation of the wells in which wellbore communication has been shown to exist by the reports of packer leakage tests submitted to the Railroad Commission, the date of such tests when wellbore communication was found to exist and the reservoirs in which the wells were completed.

There have been at least 43 instances in which wellbore communication was found to exist in multiply completed wells having at least one completion in one of the reservoirs covered by the Commission's Appling Fields Order amending procedures for determining reasonable market demand (the "Market Demand Order"). Wellbore communication has been exhibited in a total of at least 31 wells for at least one completion in a reservoir covered by this order, and at least 19 of these wells were completed both in the Middle Kopnicky reservoir and in some upper zone reservoir to which this order applies.

Wellbore communication between reservoirs has been a continuing problem in the Appling Fields, and particularly in the reservoirs covered by the Market Demand Order. For example, in the regular Commission-ordered tests in 1964, 15 wells were shown to have wellbore communication involving at least one reservoir covered by this order and 8 of these wells were completed both in the Middle Kopnicky reservoir and one of the upper zone reservoirs covered by such order. Only a few months later, when Commission personnel themselves ran packer leakage tests on all wells, wellbore communication was found in 18 wells having at least one completion in a reservoir covered by the Market

Demand Order, and of these, 9 wells were completed both in the Middle Kopnicky reservoir and some upper zone reservoir covered by this order.

This wellbore communication has a distorting effect upon gas allowables in the 4 upper zone reservoirs covered by the Market Demand Order. Since the Middle Kopnicky reservoir is a much larger reservoir and generally has higher pressures than the upper zone reservoirs, wellbore communication in a multiply completed well tends to cause an apparent increase in the producing capability of the upper zone completion in that well, and permits Producers' Forecasts to be filed by the operator of such a well far in excess of the true delivery capacity the well completion would have if no communication existed; this communication will allow gas to be produced through and credited to an upper zone reservoir well completion when in fact it had its source in the Middle Kopnicky reservoir or some other higher deliverability reservoir. In addition, the transfer through wellbore communication from one reservoir to another may cause all wells in the transferee reservoir to evidence producing capacities in excess of what they should be. The Market Demand Order tends to minimize the effect of this wellbore communication.

3. The Communication in certain Appling Field reservoirs has from time to time discarded Producers' Forecasts as not reflecting market demand; for several years, and until about August, 1963, Producers' Forecasts were not used in setting gas allowables in the Appling (Segment 6, 7600', Lower) Field, such allowables being based on the average of the preceding twelve months' reservoir production.

Since I have been employed by the Commission, I know of no other instance of complaint being made by an operator that the Commission's normal procedure for determining market demand was resulting in normal capacity wells on large tracts being treated as limited capacity wells and the allowables which would have been assigned to them being credited instead to small tract wells over an extended period of time which pre-empted the operation of the allocation formula. The Aluminum Company of America application was to amend the Commission's procedure for determining maximum reasonable market demand for all reservoirs in the Appling Fields, but the evidence submitted at that time was not sufficient in the opinion of the Commission to justify applying it to all reservoirs. This is the reason the order applied only to the 5 reservoirs covered by the order.

4. The Market Demand Order does not prevent balancing of over and under-production. Any operator who under-produces during one balancing period may over-produce during the subsequent balancing period, and any operator who over-produces during one balancing period, will be required to under-produce during the next balancing period in order to balance his production against his allowables, all in accordance with the statutory provision of Section 14, Art. 6008.

5. I know of no instance in which a gas consumer has complained to the Commission that it was unable to obtain an adequate supply of gas because of reduction of gas production in any one or more reservoirs in the Appling Fields.

6. The State of Texas is divided in Districts for purposes of regulation by the Railroad Commission. Districts 2, 3 and 4 include the entire Texas Gulf Coast, and embrace

54 counties bordering on or near the Gulf Coast. Many pipeline systems traverse these Districts running generally from the Southern tip of Texas to the Houston and Upper Gulf Coast markets; and a number of them extended to the Louisiana border. There are so many of these pipelines which pick up gas from fields in this area that this area may be properly considered as a general source of supply for gas. Virtually all of the gas consumed by the Houston area and Upper Coast markets is supplied by this general source. Houston and Upper Gulf Coast area domestic, commercial and industrial consumers, together with interstate markets, constitute the major end use of gas produced in this area.

7. Mr. Parris' affidavit attached to Plaintiffs' Motion for Summary Judgment states that I read and approved the book prepared by Mr. Parris and Mr. Edgerton; when in fact, I read only parts of this book, and I had no argument with the parts I read.

Further Affiant sayeth not.

/s/ BOB R. HARRIS
Bob R. Harris

SWORN TO AND SUBSCRIBED before me this 24th day of April, 1965.

[SEAL]

/s/ ROBERT C. MCGINNIS
Notary Public in and for
Travis County, Texas

AFFIDAVIT
(Ford Affidavit)

THE STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, the undersigned authority, on this day personally appeared KENNETH B. FORD, known to me to be a credible person, and who, after being by me first duly sworn, on his oath did depose and say:

1. I am Kenneth B. Ford. I am over twenty-one years of age and competent to testify to the facts herein set forth and make these statements of my own knowledge.

2. I am a registered professional engineer in Texas and am a member of the Society of Petroleum Engineers. I am a partner in the oil and gas consulting engineering firm of Butler, Miller and Lents. This firm was organized in May, 1948 at which time I joined the firm. During the past seventeen years, I have devoted a substantial amount of time to making gas and oil reserve studies of fields in Texas, Louisiana, Mississippi, California and other states. I have testified before the Railroad Commission of Texas and the Louisiana Department of Conservation concerning oil and gas reserves and conservation matters and before the Federal Power Commission in regard to gas reserves. In March, 1961 the Aluminum Company of America employed our firm to study certain matters relating to the multi-reservoir Appling Field, Jackson and Calhoun Counties, Texas. One purpose of this investigation was to determine the gas reserves of certain reservoirs in this field including, but not limited to, the following:

Appling (Segment 5, 7500 Foot) Field
Appling (Segment 6, 7500 Foot) Field

Appling (Segment 6, 7600 Foot) Field
Appling (Segment 6, 7600 Foot, Lower) Field
Appling (Segment A, Middle Kopnicky) Field

I made such a study at that time and have continued to study these fields up to the present date. I have also made a study, with respect to the five reservoirs referred to above, of Railroad Commission records concerning well completions, allowables, production, presssures, well producing capabilities, well bore communication, and the manner in which gas allowables are determined under Statewide Rule 31 and under Special Field Rule 11 applicable to the five reservoirs referred to above. I graduated from The University of Texas in 1940, with a B.S. degree in Petroleum Engineering, and immediately thereafter went to work for J. S. Abercrombie Company as a trainee engineer. I remained with Abercrombie until December, 1943 at which time I joined the United States Navy. During this approximate three and one-half year period as a petroleum engineer for Abercrombie, I was, among other things, engaged in the measurement of oil and gas from producing wells and the measurement and interpretation of reservoir pressure and temperature surveys. I also obtained subsurface and separator samples of hydrocarbons produced from both oil and gas wells. In addition, I set up and operated laboratory equipment that was used for determining the physical properties and phase behavior at reservoir pressure and temperature of these samples of reservoir fluids. In April, 1946, I returned to work for Abercrombie Company after being released from active duty with the Navy. I remained with this company for two years, during which time I did some engineering connected with drilling and completing gas and oil wells; however, I primarily was engaged in reservoir engineering studies concerned with the determi-

nation of gas and oil reserves of fields in the Gulf Coast Area of Texas and Louisiana.

3. Exhibit 1 attached hereto presents information regarding the reservoir gas originally in place for the five reservoirs in the Appling Fields that are subject to Special Field Rule 11, applicable to such five reservoirs. The physical factors that enter into the determination of the gas in place per acre foot of sand were determined by me from a study of the information available on these reservoirs and on similar reservoirs in other fields. I determined the total acre feet of sand for the four upper reservoirs from Mr. Werner's geological maps and from a knowledge of the net gas sand thickness of each well. For the Segment A, Middle Kopnicky Reservoir, I determined the acre feet of sand by having Mr. Werner's gas isopachous map planimetered. The total reservoir gas originally in place in each reservoir shown on Line 15 of Exhibit 1 was arrived at by multiplying the MCF of gas per acre foot shown on Line 11 by the total acre feet shown on Line 13.

4. Exhibit 2 attached hereto presents information relating to the recoverable reservoir gas originally in place in these five reservoirs. Factors utilized in my computation of the recoverable reservoir gas originally in place are shown on this Exhibit 2 and are based on my experience with these and similar reservoirs.

5. Exhibit 3 attached hereto presents information relating to gas reserves, cumulative production and depletion rates for these five reservoirs. An examination of this Exhibit shows that each of the four upper reservoirs had reported a cumulative gas production as of August 1, 1964 that greatly exceeded the original recoverable gas in these

reservoirs. For example, Segment 5, 7500 Foot Reservoir originally contained only 3,032 MMCF of recoverable gas; whereas, its reported cumulative production as of August 1, 1964 was 29,667 MMCF. This shows that the reported cumulative gas production is almost ten times as large as the recoverable gas originally in place. For the combined four upper reservoirs, there was 11,123 MMCF of original recoverable gas; whereas, they have reported as of August 1, 1964 a production of 54,783 MMCF. This reported production is about five times as large as the recoverable gas originally in place. The reported production that greatly exceeds the gas originally in place is accounted for by the widespread well bore communication (proven by Railroad Commission tests) which has permitted the production of large volumes of gas from the Segment A, Middle Kopnicky Reservoir that has been credited to these upper reservoirs. This large production of Segment A, Middle Kopnicky, gas that has been credited to the upper reservoirs has not only taken place in the communicative multiple completed wells, but from other wells without communication. This latter condition has occurred because of the flow of gas into the lower pressure upper sands from the higher pressure Middle Kopnicky sand through the communicative wells. The communication has created artificially high test rates from the upper sand completions and thereby permitted the nomination of artificially high gas volumes from such sands.

6. The apparent depletion rates (see Exhibit 3) of the upper reservoirs based on the reported production of 1963 are extremely rapid in comparison with other non-associated gas reservoirs in the State of Texas. For example, in the Segment 5, 7500 Foot Reservoir, the time required

to deplete the original recoverable gas, based on the 1963 reported production rate, was only about three-tenths (3/10) of a year. Totaling the four upper reservoirs, Exhibit 3 shows that the time required to deplete the original recoverable reserves, based on the 1963 reported gas production rate, is only about nine-tenths (9/10) of a year. An examination of Exhibit 3 shows that on an overall basis for the four upper reservoirs, the reported gas production rate for July, 1964 was very similar to the average monthly rate that existed for 1963, and that the overall apparent depletion time for these upper reservoirs as of July, 1964 was still about nine-tenths (9/10) of a year. Contrasted with the rapid depletion rate for the upper reservoirs, is the average depletion time for all non-associated reservoirs in the State of Texas for the year 1963* of 17.0 years. This means that, on an average, the four upper reservoirs in the Appling Field for the year 1963 were being depleted more than seventeen times as rapidly as the average non-associated gas reservoir in the State of Texas. The depletion rate of 17.0 years for the overall State non-associated gas reserves for 1963 is based on the remaining recoverable gas reserves as of January 1, 1963. However, due to the reported cumulative production of the upper reservoirs exceeding their original recoverable gas (and exceeding total gas originally in place for that matter) the depletion rates for these reservoirs could not be related to remaining recoverable gas but, of necessity, were related to original recoverable gas. Because this excess gas was supplied from Segment A, Middle Kopnicky Field, the combined original recoverable gas and the combined cumulative reported gas

* Most recent year for which American Gas Association gas reserves were available to me. The non-associated gas production for Texas for 1963 was obtained from Railroad Commission records.

production from the five reservoirs can be used to determine the combined remaining recoverable gas for the five reservoirs as of July 1, 1964. This remaining recoverable gas volume is 147,997 MMCF and essentially is Segment A, Middle Kopnicky gas. Based on the combined reported producing rate for 1963, the time required to deplete the remaining recoverable Segment A, Middle Kopnicky gas is only 4.13 years. Therefore, Segment A, Middle Kopnicky reservoir is being depleted more than four times faster than the average depletion rate of all non-associated reservoirs in Texas.

7. I have examined the nominations, allowables, and actual production records of these five Appling Field Reservoirs for the years 1961, 1962, 1963 and 1964. My findings from this study are set forth in Exhibit 4 attached hereto. As shown by this tabulation, there are considerable variations between nominations, allowables, and production.

8. I have examined the proration schedules of these five Appling Field Reservoirs for January, 1964 (the first month following Alcoa's hearing for determination of reasonable market demand) and found their gas allowables to be as follows:

Reservoir	Gas Allowable MCF/Day	Gas Allowable MCF/Acre/Month
Segment 5, 7500 Foot	25,258	2,347
Segment 6, 7500 Foot	3,813	615
Segment 6, 7600 Foot	1,983	1,376
Segment 6, 7600 Foot, Lower	5,816	1,105
Segment A, Middle Kopnicky	95,965	759

I have examined the January, 1964 proration schedules for all prorated non-associated gas reservoirs in Railroad

Commission Districts 2, 3 and 4 (excluding all reservoirs of the Appling Field) and found the following:

a. There are 207 non-associated gas reservoirs with reservoir allowables greater than 3,000 MCF per day. (approximate average allowable of the three smallest of the five Appling reservoirs being considered here).

b. 90% of these reservoirs have allowables less than 500 MCF per acre per month. *None* of the five Appling Field Reservoirs have allowables this low.

c. Only *two* of the 207 reservoirs have allowables greater than 1,000 MCF per acre per month; whereas, *three* of these five Appling Field Reservoirs have allowables in excess of 1,000 MCF per acre per month.

d. These five Appling Field Reservoirs, while representing only about 2% of the total prorated reservoirs in Districts 2, 3 and 4, represent 60% of all the reservoirs with allowables exceeding 1,000 MCF per acre per month.

9. I have examined the proration schedule of the five Appling Field Reservoirs for July, 1964 (the last month prior to the Commission issuing Special Field Rule 11 in which the proration schedule did not vary from normal) and found their gas allowables to be as follows:

Reservoir	Gas Allowable MCF/Day	Gas Allowable MCF/Acre/Month
Segment 5, 7500 Foot	28,411	2,628
Segment 6, 7500 Foot	3,231	618
Segment 6, 7600 Foot	3,827	2,655
Segment 6, 7600 Foot, Lower	3,701	704
Segment A, Middle Kopnicky	67,117	635

I have examined the July, 1964 proration schedules for all prorated non-associated gas reservoirs in Railroad Commission Districts 2, 3 and 4 (excluding all reservoirs of the Appling Field) and found the following:

a. There are 199 non-associated gas reservoirs with reservoir allowables greater than 3,000 MCF per day.

b. 91% of these reservoirs have allowables less than 500 MCF per acre per day. *None* of the five Appling Field Reservoirs have allowables this small.

c. None of these 199 reservoirs have allowables as great as 2,000 MCF per acre per month; however, *two* of these five Appling Field Reservoirs have allowables exceeding 2,000 MCF per acre per month. Even though these five Appling Field Reservoirs represent only about 2% of the total reservoirs in these three Railroad Commission Districts, they represent 100% of the exceedingly high allowable reservoirs in these districts.

10. For the months of January and July, 1964 the application of Special Field Rule 11 to the five reservoirs would have resulted in the following maximum reasonable market demand:

Reservoir	Maximum Reasonable Market Demand, MCF/Acre/Month	
	Jan. 1964	July, 1964
Segment 5, 7500 Foot	411	389
Segment 6, 7500 Foot	411	796
Segment 6, 7600 Foot	994	2,088
Segment 6, 7600 Foot, Lower	545	506
Segment A, Middle Kopnicky	857	765

Some of these volumes are larger than the actual assigned allowables and some are smaller. However, all these vol-

umes are far in excess of the average for all non-associated prorated gas reservoirs in Districts 2, 3 and 4, and seven of the ten volumes are greater than those assigned to 90 percent of all other reservoirs.

11. I have examined the January, 1964 proration schedules for Railroad Commission Districts 2, 3 and 4 and have found that there are 517 prorated non-associated gas reservoirs (excluding all reservoirs of the Appling Field) in these districts and that there are *only* eleven* of these reservoirs that contain small tract (two acres or less) wells with allowables and that the total of such small tract wells for these 11 reservoirs is only 26. Only five of these eleven reservoirs have more than one small tract well with allowables. On the other hand, the five Appling Field Reservoirs contain *62* small tract (two acres or less) wells with allowables. Thus, these five Appling Field Reservoirs which represent only 1% of all non-associated prorated reservoirs in Railroad Commission Districts 2, 3 and 4 contain 72% of all small tract (two acres or less) wells with allowables in these Railroad Commission Districts. The allowables situation for January, 1964 of the only five reservoirs outside of the Appling Fields that have more than one small tract (two acres or less) completion is as follows:

a. *Magnolia Beach — Kellers Bay (Foester) Field:*

4 small tract wells with allowables.
Total reservoir allowable is only 103 MCF per acre per month.

---

* Does not include three reservoirs (Normanna, Port Acres and Alta Loma, West) that have small tract wells, in which reservoirs the small tract wells are assigned small special allowables.

b. *Fulton Beach (A-2) Field:*

2 small tract wells with allowables.
Total reservoir allowable is only 26 MCF per acre per month.

c. *Hidalgo (El Taxano, Upper) Field:*

6 small tract wells with allowables.
Total reservoir allowable is only 125 MCF per acre per month.

d. *Hidalgo (Hackney) Field:*

6 small tract wells with allowables.
Total reservoir allowable is only 144 MCF per acre per month.

e. *McAllen (Hansen) Field:*

2 small tract wells with allowables.
Total reservoir allowable is only 195 MCF per acre per month.

In Section 8 of this Affidavit the allowables for the five Appling Reservoirs are shown to range from 615 to 2,347 MCF per acre per month, which are 3 to 12 times larger than the maximum allowable of the above fields.

1. I have examined the July, 1964 proration schedules of all non-associated gas reservoirs in Railroad Commission Districts 2, 3 and 4 and found that there were 549 such reservoirs receiving allowables. There are only twelve* of these reservoirs containing small tract (two acres or less)

* Does not include three reservoirs (Normanna, Port Acres and Alta Loma, West) that have small tract wells, in which reservoirs the small tract wells are assigned small special allowables.

wells with allowables and there are a total of only 30 small tract wells receiving allowables. On the other hand, in these five Appling Field Reservoirs that represent only 1% of the total non-associated gas reservoirs receiving allowables in Districts 2, 3 and 4, there were 60 small tract (two acres or less) completions with allowables. Therefore, these five Appling Reservoirs, while representing only 1% of the reservoirs in these districts contain 67% of the small tract (two acres or less) wells with allowables in these districts. The allowable situation for July, 1964 of the only five reservoirs outside of the Appling Fields that have more than one small tract (two acres or less) completion is as follows:

a. *Magnolia Beach — Kellers Bay (Foester) Field:*
   5 small tract wells with allowables.
   Total reservoir allowable is only 111 MCF per acre per month.

b. *Fulton Beach (A-2) Field:*
   2 small tract wells with allowables.
   Total reservoir allowable is only 33 MCF per acre per month.

c. *Hidalgo (El Taxano, Upper) Field:*
   6 small tract wells with allowables.
   Total reservoir allowable is only 69 MCF per acre per month.

d. *Hidalgo (Hackney) Field:*
   6 small tract wells with allowables.
   Total reservoir allowable is only 136 MCF per acre per month.

e. *McAllen (Hansen) Field:*
   2 small tract wells with allowables.
   Total reservoir allowable is only 204 MCF per acre per month.

In Section 9 of this Affidavit, the allowables for the five Appling Reservoirs are shown to range from 618 to 2,655 MCF per acre per month, which are 3 to 13 times larger than the maximum allowable of the above fields.

13. My study of producer's forecasts, allowables, and production for small tract wells (two acres or less) in these five reservoirs shows that at the present time and for the past several years, these operators of small tract wells, with few exceptions, have been nominating and/or receiving allowable for and/or producing each month more gas than was originally in place under their tracts in these reservoirs.

14. Based on the facts presented in this Affidavit, it is clear that the special conditions that exist in these five Appling Field Reservoirs do not exist outside the Appling Field in any reservoir in Railroad Commission Districts 2, 3 and 4 and that statewide procedure as outlined in Statewide Rule 31 is not adequate for these special conditions. For this reason, Special Field Rule 11 written by the Commission is reasonably necessary for effective and fair regulation in these fields.

Further Affiant sayeth not.

/s/ KENNETH B. FORD
Kenneth B. Ford

SWORN TO AND SUBSCRIBED before me this 24th day of April, 1965.

/s/ CAROL BOHN
Notary Public in and for
Harris County, Texas

[SEAL]